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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/395,300	09/13/1999	EDWARD G. TIEDEMANN JR.	PA990073	5802

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Qualcomm Incorporated  
Patents Department  
5775 Morehouse Drive  
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EXAMINER

JAGANNATHAN, MELANIE

ART UNIT

PAPER NUMBER

2666

DATE MAILED: 10/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/395,300

Applicant(s)

TIEDEMANN, EDWARD G.

Examiner

Melanie Jagannathan

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 September 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-22, 25-28 and 34-43 is/are allowed.
- 6) ☒ Claim(s) 23, 24, 29 and 33 is/are rejected.
- 7) ☐ Claim(s) 30-32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 and 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims **29 and 33** are rejected under 35 U.S.C. 103(a) as being unpatentable over Asanuma U.S. Patent Number 5,983,113. The claimed CDMA system comprising a first base station configured to transmit a first signal, a second base station configured to transmit a second signal and a sync unit configured to receive the first and second signals is disclosed by Asunama where a CDMA system comprising a plurality of mobile stations is configured to send up-link channel signals to a base station. See Figure 1. The claimed determination of a relative phase difference between the two signals is taught in Asunama where the base station senses the phase difference between the orthogonal codes of the up-link channel signals from the mobile stations. See Figure 2, element 31. The claimed second base station being further configured to adjust the phase at which the second signal is transmitted based upon the relative phase difference is disclosed by Asunama where the base station creates timing control information for controlling the phase difference, notifies this information to the mobile stations and on the basis of the timing control information sent by the base station, each mobile station adjusts the transmission timing of an up-link channel signal. See Figure 4 and see column 2, lines 19-66. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to arrange for the claimed base stations to be configured to transmit signals as in the mobile stations of

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Asunama, the claimed sync unit to receive the signals and determine a phase difference as in the base station of Asunama and the claimed second base station to be configured to adjust the phase of its signal based upon the phase difference as in the mobile stations of Asunama adjusting its signals based on the timing control information sent by the base station as in Asunama. A person of ordinary skill in the art would be motivated to do this as it enables high-quality radio communication with less interference between channels by maintaining orthogonality between the up-link channel signals and thereby increasing channel capacity. See column 2, lines 13-18.

***Allowable Subject Matter***

3. Claims **30-32** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Asanuma discloses a CDMA system comprising a plurality of mobile stations configured to send up-link channel signals to a base station. The base station senses the phase difference between the orthogonal codes of the up-link channel signals from the mobile stations and creates timing control information for controlling the phase difference closer to zero and notifies this information to the mobile stations. On the basis of the timing control information sent by the base station, each mobile station adjusts the transmission timing of an up-link channel signal. See column 2, lines 19-66. However, the prior art of record fails to disclose transmitting a first signal using a first CDMA channelization and a second signal using a second CDMA channelization as in claims **1, 11, 21, 34, 36 and 43**. Moreover, the prior art of record fails to disclose the determination of signal energies and power levels of the signals as in claims **1, 11,**

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**21 and 43.** Furthermore, the prior art of record fails to disclose the determination of a level of loading based upon the power level of a signal as in claim **21, 34, and 43.**

Additionally, all of the further limitations in claims **2-10, 12-20, 22, 25-28, 35, 37-42** are allowable since the claims are dependent upon the independent claims.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Toskala et al U.S. Patent Number 6,377,606 discloses a method for reducing interference in a radio system.

Hoole U.S. Patent Number 5,907,577 discloses a solution to delay compensation by providing base stations with the ability to measure the magnitude and angle of the phase of delay compensation tones.

Bruckert et al U.S. Patent Number 5,446,727 discloses a method and apparatus for time-aligning signals for reception in a CDMA communication system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie Jagannathan whose telephone number is 703-305-8078. The examiner can normally be reached on Monday-Friday from 8:00 a.m.-4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 703-308-5463. The fax phone numbers for the

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organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9315 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

MJ *MJ*  
October 24, 2002

*Seema S. Rao*  
Seema S. Rao  
Supervisory Patent Examiner  
AU 2666  
October 24, 2002